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Australian Academy of Science submission to the call for inputs for the Belém Mission to 1.5

The Australian Academy of Science (the Academy) reaffirms the critical need to reduce global warming to well below 2°C and to pursue efforts to limit warming to 1.5°C.

It is now virtually impossible to limit global warming to 1.5°C without a period of overshoot, and pathways with overshoot involve considerable uncertainty.¹ This fact should not deter action, rather it should accelerate it.

Based on current policies globally, we are on track to see warming of 2.8°C.²

The economic, health, social, environmental, political and human costs of dealing with the likely consequences of this degree of warming far exceed the costs of limiting warming to 1.5°C.

Urgent and ambitious action is required to limit warming as much as possible. Every fraction of a degree of warming matters. As does the length and peak of overshoot.

This submission draws on Australia's experience in science-informed climate action, with broader opportunities for parties in the Asia-Pacific and Southern Hemisphere.

As incoming COP31 President of Negotiations, Australia occupies a unique platform to model credible, ambitious action. The science capability investments and policy commitments recommended here are part of demonstrating that leadership in practice. The submission addresses actions and barriers related to Australia's science capability that have the potential to advance ambition and implementation of Australia's Nationally Determined Contribution and National Adaptation Plan, as well as areas where Australia can exercise regional leadership in the Asia-Pacific.

The Academy recommends that:

1. the Australian Government should strategically direct resources to address science capability gaps, to strengthen the ability of Australia to mitigate and adapt to climate change and support evidence-informed policy in our region.
2. the Australian Government should maintain and enhance Australia's climate modelling capability, including its full integration into global models, recognising the essential role of this capability for Australia and the Southern Hemisphere.
3. the Australian Government should establish and fund a long-term solution for earth system science to develop, coordinate and implement the national capability required to strengthen Australian climate modelling.
4. the Australian Government should fund mechanisms to facilitate intersections, collaborations and relationship building between Traditional Knowledges and science.
5. the Australian Government should pursue the highest end of Australia's 2035 Nationally Determined Contribution range (70% reduction in national greenhouse gas emissions below 2005 emission levels), or higher.
6. the Australian Government should measure and reduce scope 3 emissions, recognising the full scope of Australia's climate impact as an exporter of fossil fuels.

¹ United Nations Environment Programme (2025). *Emissions Gap Report 2025: Off target – Continued collective inaction puts global temperature goal at risk* [Olhoff, A., chief editor; Lamb, W.; Kuramochi, T.; Rogelj, J.; den Elzen, M.; Christensen, J.; Fransen, T.; Pathak, M.; Tong, D. (eds)]. <https://doi.org/10.59117/20.500.11822/48854>.

² Ibid.

7. Parties should set and implement national targets for methane emission reductions aligned with the Global Methane Pledge—a 30% reduction by 2030 from the 2020 baseline—and pursue actions to achieve that target.
8. Parties should set national greenhouse gas removal targets, implement conventional and novel approaches, and foster innovation in greenhouse gas removal science and technology.
9. Parties should embed just adaptation principles in adaptation planning and implementation.
10. Parties should facilitate the delivery of localised climate data to support local adaptation planning and interventions.
11. Parties should invest in collaborative structures and science diplomacy architecture to underpin international collaboration on climate change mitigation and adaptation.
12. Parties should commit to securing and sustaining open climate science.

1. What action areas and solutions have the highest impact potential to support the submission, ambition and implementation of NDCs and NAPs?

Leadership and capability

Australia's scientific leadership in the Asia-Pacific region

The Academy acknowledges and welcomes the Australian Government's role as President of Negotiations at COP31 and focus on advancing the interests of our Pacific neighbours.

Building on the commitment demonstrated through Australia's role as President of Negotiations, the Australian Government should support ongoing leadership in our region and partnerships that strengthen cooperation on climate research and deepen science advice mechanisms.

Australia's scientific leadership in our region includes our strong participation in multilateral research initiatives, international scientific advisory bodies and shared data platforms. Australia is well positioned in the Southern Hemisphere to sustain a leading observational, process-based understanding and modelling capability. Australia also has the scientific architecture and stable governance to support the foundations of local science networks and advice mechanisms in the Pacific. Combined, this gives Australia the ability to be a trusted partner to address shared climate challenges in the Asia-Pacific region – if the Australian Government prioritises this opportunity and invests in science capability.

Prioritising investment in these mechanisms is imperative for coherent, evidence-informed and coordinated global climate action. It is also essential to processes which recognise and address unavoidable and irreversible climate impacts, with science an important input to loss and damage attribution.

Australia must strengthen the science capability that underpins climate adaptation and mitigation

Science will continue to advance the knowledge and tools we need to mitigate, adapt to and monitor climate change – capability which must be supported with certain, strategic, long-term investment.

Analysis for the Academy's [Australian Science, Australia's Future: Science 2035](#) initiative identified eight science capabilities increasing in demand in Australia, of which many are essential to Australia's ability to achieve our climate mitigation and adaptation goals, such as climate science, geoscience and materials science. Strategic science capability planning is needed to ensure Australia can deliver these capabilities, with some already at risk of falling short of demand.

Many sciences produce the knowledge and technologies that Australia needs to respond to climate change. Australian climate science, spanning observation and modelling underpin climate adaptation and mitigation, is critical to understand our unique climate. Observations and fundamental climate science knowledge underpin our ability to model future changes. Australia needs the full spectrum of capability to have accurate national climate information and feed into international processes.

Knowledge of Australia's unique ecosystems and biodiversity is vital for understanding climate change impacts and developing mitigation options.

Marine and ocean science provides fundamental knowledge of Earth's largest carbon sink. This capability is critical to simulate oceans in climate models, explore the role of the ocean in greenhouse gas removal, and understand and adapt to climate impacts on marine ecosystems.

Geoscience and materials science will both be critical to achieving Australia's renewable energy target (82% by 2030) and the global electrification target announced at the Bonn Climate Change Conference (35% by 2035).^{3,4}

Geoscience is in increasing demand but risks not being able to meet the needs Australia will face from climate change and other threats over the next decade, due to declining enrolments and workforce shortages. Geoscience underpins the discovery and extraction of critical minerals used in renewable energy technologies, geological storage for greenhouse gas removal, groundwater management, natural hazard assessment, and the evidence base for climate-resilient infrastructure.

Australia's materials science capability is also under strain, with existing education, workforce and funding gaps. Materials science is fundamental to the transition to net zero and spans application across mitigation and adaptation, including designing more resilient building materials, environmental sensors, battery developments to support the energy transition, greenhouse gas removal methods and hydrogen production.

Recommendation 1: The Australian Government should strategically direct resources to address science capability gaps to strengthen the ability of Australia to mitigate and adapt to climate change and support evidence-informed policy in our region.

Australia must maintain and enhance its climate modelling capability

Climate modelling underpins climate mitigation and adaptation, for example informing adaptation planning, greenhouse gas removal implementation and the strategic siting of critical infrastructure.

ACCESS-NRI is the national research infrastructure that supports the development of and research with the Australian Climate Community Earth Systems Simulator (ACCESS) modelling system. It provides essential services underpinning capability to model climate change in Australia and our region. ACCESS is the only physical climate model with bespoke development for the Southern Hemisphere.⁵

Australian leadership in delivering this capability ensures the Southern Hemisphere is represented in global coupled climate models. Australia contributes to the Coupled Model Intercomparison Project (CMIP) through a partnership between ACCESS-NRI and CSIRO. CSIRO provides a coordinating role, managing the reporting and delivery of ACCESS models into CMIP.

ACCESS-NRI is only one component of Australia's climate modelling capability. It provides the software infrastructure and technical solutions that integrates science from Australia and overseas, but it does not identify or resolve science questions.⁶

Climate science capability in the National Environmental Science Program (NESP), publicly funded research agencies and universities must be maintained to undertake research with ACCESS-NRI. This includes collecting observations of our climate on which models rely – today's observations cannot be collected tomorrow. High-performance computing and data (HPCD) infrastructure is also fundamental to Australia's climate modelling capability.

³ Department of Climate Change, Energy, the Environment and Water (2025). *Australia's 2035 Nationally Determined Contribution*. <https://unfccc.int/sites/default/files/2025-09/Australias%20Second%20NDC.pdf>.

⁴ UNFCCC (9 June 2026). COP31 Presidency announces new targets on global electrification, cutting waste, resilient cities; press conference transcript. <https://unfccc.int/news/cop31-presidency-announces-new-targets-on-global-electrification-cutting-waste-resilient-cities>.

⁵ Australian Academy of Science (2024). *A decadal plan for Australian Earth system science 2024–2033*. <https://science.org.au/our-work/resources-reports/reports-publications/decadal-plan-australian-earth-system-science-2024-2033>.

⁶ Ibid.

ACCESS requires a seamlessly integrated Tier-1 peak HPCD system, and a pathway to exascale HPCD.⁷ This need extends beyond climate modelling and to other science disciplines. The Academy has [proposed](#) a 10-year plan to deliver long-term strategy and targeted investment in Australia's HPCD infrastructure.

Without these elements Australia's ability to contribute to global climate models and deliver essential national capability will falter.

Australia cannot simply maintain its existing climate modelling capability, it must also be strengthened. Models cannot yet simulate the processes at the local scales critical for adaptation and will never do so without investment in further development. Increasing the granularity of Australia's climate models is an essential capability to enhance adaptation planning.

Similarly, climate models are critical to the deployment of greenhouse gas removal approaches as they can inform understanding of the potential success of different approaches and how they may impact Earth systems.⁸ Novel greenhouse gas removal approaches can be more difficult to implement into models, further exemplifying why continued uplift of our modelling capability is required.⁹

Recommendation 2: The Australian Government should maintain and enhance Australia's climate modelling capability, including its full integration into global models, recognising the essential role of this capability for Australia and the Southern Hemisphere.

Recommendation 3: The Australian Government should establish and fund a long-term solution for earth system science to develop, coordinate and implement the national capability required to strengthen Australian climate modelling.¹⁰

Australia has an opportunity to be global leaders in best practice collaboration with First Nations peoples for evidence-informed decision-making

Australia's unique problems require homegrown solutions informed by First Nations knowledges and science in decision-making, management and conservation practices.

The Academy acknowledges existing methods and platforms that can be built upon, including the methodology adopted to produce the 2021 State of the Environment Report and the National First Peoples Platform on Climate Change (NFPPCC) and National First Peoples Gathering on Climate Change, led by First Nations people in Australia and supported by the NESP Climate Systems Hub.

Uplifting Australia's climate change resilience and collaboration between knowledge systems, requires sustained funding, targeted research streams appropriate to the Australian context and strong cross sector collaboration between government, academia and industry.

Recommendation 4: The Australian Government should fund mechanisms to facilitate intersections, collaborations and relationship building between Traditional Knowledges and science.

⁷ Ibid.

⁸ Australian Academy of Science (2023). *Greenhouse gas removal in Australia: A report on the novel negative emissions approaches for Australia roundtable*. <https://science.org.au/our-work/resources-reports/reports-publications/greenhouse-gas-removal-australia-report-novel-negative-emissions-approaches-australia-roundtable>.

⁹ Ibid.

¹⁰ Australian Academy of Science (2024). *A decadal plan for Australian Earth system science 2024–2033*. <https://science.org.au/our-work/resources-reports/reports-publications/decadal-plan-australian-earth-system-science-2024-2033>.

Climate change mitigation

Australia should pursue the ambitious edge of its National Determined Contribution or higher

Australia's 2035 Nationally Determined Contribution is a 62-70% reduction in net national greenhouse gas emissions below 2005 emissions levels.¹¹

Currently, Australia is not on track to achieve this. The Climate Change Authority's 2025 annual progress report found that Australia needs to triple our current pace of emissions reduction to reach the top end of the 2035 emissions target.¹²

Recommendation 5: The Australian Government should pursue the highest end of Australia's 2035 Nationally Determined Contribution range (70% reduction in national greenhouse gas emissions below 2005 emission levels), or higher.

Australia should measure its scope 3 emissions

Scope 3 emissions are indirect emissions that are a consequence of an entity's actions but occur from sources not controlled by that entity. Fossil fuel exports are a major contributor to Australia's scope 3 emissions.

When Australia exports coal and gas to other countries, the resulting greenhouse gas emissions occur offshore. A 2025 advisory opinion by the International Court of Justice commented on the responsibility States have for emissions from fossil fuel production. The Court advised that:

*Failure of a State to take appropriate action to protect the climate system from GHG emissions — including through fossil fuel production, fossil fuel consumption, the granting of fossil fuel exploration licences or the provision of fossil fuel subsidies — may constitute an internationally wrongful act which is attributable to that State.*¹³

The Academy recognises that measuring scope 3 emissions is complex. However, this complexity is not insurmountable. The magnitude of scope 3 emissions could be quantified from the amounts of coal and gas exports and how it is likely to be used.

Recommendation 6: the Australian Government should measure and reduce scope 3 emissions, recognising the full scope of Australia's climate impact as an exporter of fossil fuels.

Methane reductions and greenhouse gas removal are opportunities for further action

While the Academy reiterates the essential focus on rapid and ambitious CO₂ emissions mitigation, there are additional actions that must be taken to return to 1.5°C following overshoot. This includes intensified methane emission reductions in alignment with the Global Methane Pledge and innovation in the methods of greenhouse gas removal that can be deployed at sufficient scale.

Methane reductions

To keep the 1.5°C target alive with overshoot, Parties should intensify mitigation of methane emissions.

While greenhouse gases are often treated as exchangeable via measures such as CO₂ equivalents, different greenhouse gases are not exchangeable in their role in reaching net zero, stabilising the climate and bringing temperatures back down following overshoot.

CO₂ must reach net zero to stabilise the climate and has, for good reason, received the most attention and effort. However, methane (CH₄) reductions are also critical to keep the 1.5°C target within reach (with overshoot).

¹¹ Department of Climate Change, Energy, the Environment and Water (2025). *Australia's 2035 Nationally Determined Contribution*. <https://unfccc.int/sites/default/files/2025-09/Australias%20Second%20NDC.pdf>.

¹² Climate Change Authority (2025). *2025 Annual Progress Report*. <https://www.climatechangeauthority.gov.au/2025-annual-progress-report>.

¹³ International Court of Justice (2025). *Advisory opinion – Obligations of states in respect of climate change*. <https://www.icj-cij.org/sites/default/files/case-related/187/187-20250723-adv-01-00-en.pdf>.

Fast reductions of CO₂ emissions will ultimately stop the net CO₂ accumulation in the atmosphere, resulting in further warming being halted. In addition, aggressive methane emission reductions can be used to lower peak warming, and in the case of the 1.5°C target, to bring temperatures down after overshoot.

Methane is now responsible for 0.5°C of warming globally.¹⁴

Methane has much shorter lifetime in the atmosphere compared to CO₂, with temperature responding to methane emissions reductions in the time scale of one to a few decades.¹⁵ On a 20-year time scale, methane is over 80 times more potent in terms of warming than CO₂.¹⁶ This shorter response time and higher warming potential of methane can help lower temperatures in an overshoot scenario, the only remaining viable pathway to 1.5°C.

Parties should commit to actions to achieve the Global Methane Pledge target: to reduce global methane emissions at least 30 percent from 2020 levels by 2030.¹⁷ While many countries have pledged to reduce methane, implementation is currently weak.¹⁸

Australia is a signatory to the Global Methane Pledge and the case for methane reductions is clear. However, the Australian Government is yet to establish a specific national methane emissions target and plan for implementation. The Academy recognises the Climate Change Authority's current consultation on fossil methane as a starting point for action on methane reductions.¹⁹

Methane is Australia's second most important greenhouse gas emission. The largest source of methane emissions in Australia are ruminant livestock, followed by emissions associated with fossil fuel extraction, processing and transportation, with coal mining contributing the biggest share.^{20, 21}

Increased methane mitigation must not replace the most ambitious efforts to reduce CO₂ emissions. Methane reductions should be an additional effort informed by the latest science.

Recommendation 7: Parties should set and implement national targets for methane emission reductions aligned with the Global Methane Pledge—a 30% reduction by 2030 from the 2020 baseline—and pursue actions to achieve that target.

Greenhouse gas removal

Reducing greenhouse gas emissions and removing greenhouse gases in the atmosphere are both required to achieve the 1.5°C target.²²

¹⁴ IPCC (2023). Summary for Policymakers, in *Climate Change 2023: Synthesis Report*.

https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

¹⁵ Canadell, J.G., Villalobos, Y., Harman, I., and Evans, H. (2025). *Australia's methane budget*. Fact sheet. NESP Climate Systems Hub. https://nesp2climate.com.au/wp-content/uploads/2025/10/Fact-sheet_Australias-methane-budget_Final-1.pdf.

¹⁶ IPCC (2021). The Earth's Energy Budget, Climate Feedbacks, and Climate Sensitivity Supplementary Material, in *Climate Change 2021: The Physical Science Basis*.

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter07_SM.pdf.

¹⁷ Global Methane Pledge. <https://www.globalmethanepledge.org/>.

¹⁸ IEA (2025). *Global Methane Tracker 2025*. <https://iea.blob.core.windows.net/assets/b83c32dd-fc1b-4917-96e9-8cd918801cbf/GlobalMethaneTracker2025.pdf>.

¹⁹ Climate Change Authority (2026). *Fossil methane: A near-term abatement opportunity – Consultation paper*.

<https://www.climatechangeauthority.gov.au/fossil-methane-near-term-abatement-opportunity>.

²⁰ Villalobos, Y., Canadell, J. G., Keller, E. D., Briggs, P. R., Ford, P., Harman, I. N., et al. (2025). Methane and nitrous oxide budgets for Australasia: A regional assessment of natural and anthropogenic sources and sinks. *Global Biogeochemical Cycles*, 39, e2024GB008484. <https://doi.org/10.1029/2024GB008484>.

²¹ Climate Change Authority (2026). *Fossil methane: A near-term abatement opportunity – Consultation paper*.

<https://www.climatechangeauthority.gov.au/fossil-methane-near-term-abatement-opportunity>.

²² IPCC (2022). Summary for Policymakers in *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. [Shukla, P.R., et al., (eds.)]. Cambridge University Press. <https://www.ipcc.ch/report/ar6/wg3/chapter/summary-for-policymakers/>.

Greenhouse gas removal (GHG removal) describes the removal of greenhouse gases from the atmosphere and their durable, long-term storage. Geological storage provides the longest-term storage with estimates exceeding 100,000 years.²³

GHG removal is needed for two main reasons: to offset hard-to-abate emissions to achieve net zero, and to further reduce greenhouse gas concentrations following overshoot. However, GHG removal does not remove the need to reduce emissions. Rather, emissions reduction should be accelerated to reduce reliance on GHG removal.

The Australian Government has recognised the role of GHG removal in reaching net zero. Scaling up net carbon removals is one of five decarbonisation priorities in Australia's Net Zero Plan, and the Australian Government commissioned the CSIRO to develop the Australian Carbon Dioxide Removal Roadmap.^{24, 25}

The Australian Carbon Dioxide Removal Roadmap reaffirms key themes identified during an expert roundtable convened by the Academy in 2023 to determine the scientific capability, research and collaboration needed to support breakthroughs in GHG removal.

To meet the Paris Agreement's goals, Australia requires a robust portfolio of affordable and environmentally and socially acceptable GHG removal solutions suited to Australia's unique environment and natural assets. At this stage, all viable solutions should be investigated to develop the scale of GHG removal required. No single approach will be able to achieve the required scale alone.

This portfolio would combine conventional and novel approaches. Novel technological approaches are currently expensive and need further development to be deployed at scale, but have the potential to abate emissions with a smaller land footprint. Investment in R&D is required to stimulate innovation of scalable, affordable methods.

Australia has been active in promoting nature-based approaches such as afforestation, reforestation and carbon farming. These carry environmental and biodiversity co-benefits but do not have long-term storage capability and are likely to be adversely affected by climate extremes now and in the future, including further increases in temperature extremes, increases in drought intensity, and increases in extreme fire weather. To achieve a GHG removal target, the acceleration of viable technologies for GHG removal and storage, with long-term storage capabilities with minimal leakage for periods of longer than 500 years, should be a priority.

Novel GHG removal research and development is also an opportunity for Australia. Australia is well-positioned to collaborate with international partners on the development and deployment of novel methods, with strengths including:

- A large land area and abundant mineral resources that could present locations for testing and development of different GHG removal approaches.
- Potential for underground storage of carbon, and existing recognised expertise in geological carbon storage.
- Extensive renewable energy potential, noting that GHG removal approaches can have high energy demands.
- Large marine estate and marine research capabilities.

The Academy calls for Australia and other Parties to develop national GHG removal targets, implement conventional and novel solutions, and invest in innovation in GHG removal.

²³ Australian Academy of Science (2023). *Greenhouse gas removal in Australia: A report on the novel negative emissions approaches for Australia roundtable*. <https://science.org.au/our-work/resources-reports/reports-publications/greenhouse-gas-removal-australia-report-novel-negative-emissions-approaches-australia-roundtable>.

²⁴ Department of Climate Change, Energy, the Environment and Water (2025). *Australia's Net Zero Plan*. <https://www.dcceew.gov.au/climate-change/publications/net-zero-plan>.

²⁵ CSIRO (2025). *Australian Carbon Dioxide Removal Roadmap*. <https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/csiro-futures/energy/cdr-roadmap>.

The Australian Government should utilise the Australian Carbon Dioxide Roadmap and the Academy's [Greenhouse gas removal in Australia](#) report as a basis to identify and implement next steps to foster innovation in GHG removal methods in Australia over the next decade.

Recommendation 8: Parties should set national greenhouse gas removal targets, implement conventional and novel approaches, and foster innovation in greenhouse gas removal science and technology.

Climate change adaptation

Australia should progress towards local and just adaptation interventions

The Academy's report [The risks to Australia of a 3°C warmer world](#) describes what Australia will be like when average global surface temperatures reach 3°C. These impacts include more frequent and severe extreme weather events like floods, fires and heatwaves that threaten the safety of homes, the resilience of food supply chains and the health wellbeing of Australians.²⁶

Based on current policies globally we are on track to see warming of 2.8°C.²⁷ We must prepare for and increase resilience to these changes.

All Australians will be affected by climate change, but there will be parts of the community that are more affected than others, including vulnerable and remote communities, as well as workers in industries whose jobs may be impacted by climate change mitigation and adaptation.

Local, state, and federal governments, and other stakeholders should embed justice in climate adaptation. There should be early, comprehensive and coordinated consideration of the impact of adaptation policies on communities, including Indigenous communities, disadvantaged communities, rural communities, children, and young people. The Academy also recommends undertaking targeted engagement with older adults, who are particularly vulnerable to the health and economic impacts of climate change.

The Academy acknowledges the work to date through Australia's National Adaptation Plan, including Australia's first National Climate Risk Assessment (NCRA). While the NCRA is a valuable starting point, it does not provide the granular level of detail required for implementation yet. The Australian Government should support future versions of the NCRA which develop the more granular information required.

Adaptation plans are only as good as the climate information they rely on. Adaptation interventions will need to be deeply local, and as such more localised climate models are a key input to support decision-making. The Academy reinforces Recommendation 2, to enhance Australia's climate modelling capability including the granularity of climate models.

The Australian Government should facilitate the flow of information to local adaptation planning and interventions. This aligns with Australia's National Adaptation Plan, which has recognised "[c]limate science, data and risk management information" as cross-cutting enablers for adaptation.²⁸

Recommendation 9: Parties should embed just adaptation principles in adaptation planning and implementation.

Recommendation 10: Parties should facilitate the delivery of localised climate data to support local adaptation planning and interventions.

²⁶ Australian Academy of Science (2021). *The risks to Australia of a 3°C warmer world*. <https://science.org.au/our-work/resources-reports/reports-publications/risks-australia-3degc-warmer-world>.

²⁷ United Nations Environment Programme (2025). *Emissions Gap Report 2025: Off target – Continued collective inaction puts global temperature goal at risk* [Olhoff, A., chief editor; Lamb, W.; Kuramochi, T.; Rogelj, J.; den Elzen, M.; Christensen, J.; Fransen, T.; Pathak, M.; Tong, D. (eds)]. <https://doi.org/10.59117/20.500.11822/48854>.

²⁸ Department of Climate Change, Energy, the Environment and Water (2025). *National Adaptation Plan*. <https://www.dcceew.gov.au/sites/default/files/documents/national-adaptation-plan.pdf>.

2. What is required to further strengthen international cooperation to enhance ambition and enable the effective implementation of NDCs and NAPs?

Continued investment in structures to strengthen international cooperation on climate change

Collaborative mechanisms, particularly collaborative funding initiatives, provide a foundation for international research cooperation to mitigate and adapt to climate change. Australia, nor any other country, can do it alone.

Building collaborative relationships, knowledge sharing and capacity building are embedded into the goals, design and incentives of these initiatives. Concerted, cooperative and open partnerships should be maintained through the sustained funding of such structures. For Australia and our region, such structures include the Asia Science Mission, a collaboration across Asia and the Pacific bring to address pressing challenges and deliver solutions to socio-ecological challenges including climate resilience.

Globally, they include the International Panel on Climate Change, the World Climate Research Programme, the Global Environment Facility, International Fund for Agricultural Development, the Group on Earth Observations and many more.

The International Science Council Regional Focal Point for Asia and the Pacific, hosted by the Academy, seeks to ensure that the unique needs and priorities of Asia and the Pacific region are integrated into the global scientific dialogue. This includes engagement with partners to build capability for science advice and science diplomacy architecture in the Pacific, such as supporting the establishment of the Pacific Academy, and funding calls for collaborative research missions.

Recommendation 11: Parties should invest in collaborative structures and science diplomacy architecture to underpin international collaboration on climate change mitigation and adaptation.

Sharing reliable, transparent and comparable climate information (such as satellite observations and climate models) across borders is essential to provide common scientific evidence for effective international collaboration on climate change. Recently, we have seen a reduction in support for agencies such as the US National Oceanic and Atmospheric Administration (NOAA), which have historically played an important role in producing and maintaining critical datasets. In this context, there is a growing need for international partners, research institutions and non-governmental organisations to prioritise robust data stewardship and research collaboration.

Recommendation 12: Parties should commit to securing and sustaining open climate science.

To discuss or clarify any aspect of this submission, please contact Lauren Sullivan, Science Policy and Advice Manager (science.policy@science.org.au).